

Claims:

1. A torsion resistant scleral-tensioning stent for positioning in a tunnel formed intrasclerally in a globe of an eye, comprising

5 portion with a bottom surface and a leg portion extending substantially perpendicularly from a side surface of said cross portion,

10 said leg portion having a bottom surface with an arcuate portion and a substantially planar portion at an end of said leg portion distal from said cross portion,

15 wherein said arcuate portion has a curvature greater than a radius of curvature of the globe in the area of the tunnel,

whereby at least a portion of said arcuate bottom surface is adapted to increase the diameter of the scleral size adjacent said tunnel when said stent is positioned in said tunnel; and

20 wherein said bottom surface of said cross portion is dimensioned to be disposed external to said tunnel for resisting torsional forces on said leg portion.

2. The stent of Claim 1 wherein said cross portion extends beyond said tunnel.

3. The stent of Claim 2 wherein said arcuate stent has a base curve of from 25 about 8 to about 9 mm.

4. The stent of Claim 2 wherein said arcuate stent has a peak of about 30 7 mm.

5. The stent of Claim 1 wherein is said stent is out-gassing free
6. The stent of Claim 5 comprising thermosetting PMMA.
7. The stent of Claim 1 wherein said stent slopes sharply from a maximum height at the leg-portion to a minimum thickness at the cross portion.

5 8. The stent of Claim 1 wherein said stent is arcuate biased.
9. The stent of Claim 8-further comprising a linear bore hole extending from the flange through the body of the stent.

10 10. The stent of Claim 8 further comprising a removable stylet positioned within said bore hole.

11 11. The stent of Claim 1 wherein the proximal flanged is flat on the bottom surface.

12. The stent of Claim 1 wherein the distal end of the stent is tapered

13. The stent of Claim 1 further comprising an anti-torsion-cap adapted and configured to conform to the distal end of said stent.

15 14. The stent of Claim 1 wherein the distal end of the stent comprises an insertion blade.

15. The stent of Claim 14 wherein the insertion blade is removable.

16. The stent of Claim 1 further comprising affixation means notches.

17. A torsion resistant scleral-tensioning multi-arcuate-stent comprising at

20 least about four torsion resistant scleral-tensioning stents positioned

(i) about equidistant about the sclera, and

(ii) in non-circulatory-compression arcs.

18. A method of chronically increasing ocular fluid drainage by the steps of placing at least two torsion resistant scleral-tensioning arcuate-stents comprising at least about four torsion resistant scleral-tensioning stents positioned

- (i) about equidistant about the sclera, and
- 5 (ii) in non-circulatory-compression arcs.

19. A method of chronically reducing ocular fluid out-flow resistance by the steps of placing at least two torsion resistant scleral-tensioning arcuate-stents positioned

- (i) about equidistant about the sclera, and
- 10 (ii) in non-circulatory-compression arcs.

20. A method of chronic glaucoma palliation by the steps of placing at least two torsion resistant scleral-tensioning arcuate-stents positioned

- (i) about equidistant about the sclera, and
- 15 (ii) in non-circulatory-compression arcs.

21. A method of presbyopia palliation by the steps of placing at least two torsion resistant scleral-tensioning arcuate-stents comprising at least about four torsion resistant scleral-tensioning stents positioned

- (i) about equidistant about the sclera, and
- 20 (ii) in non-circulatory-compression arcs.

22. A method of avoiding, delaying, or reversing the lens opacification by the method of placing at least two scleral-tensioning arcuate-stents positioned

- (i) about equidistant about the sclera, and

(ii) in non-circulatory-compression arcs.

— 28. A method of astigmatism reduction by the steps of placing at least one torsion resistant scleral-tensioning arcuate-stent in an intra-scleral position proximate to the lens and beyond the visual pathway to advance the outward 5 surface of a lens in the quadrant nearest the stent.